

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A vector or plasmid comprising an isolated DNA encoding vitamin B₆ phosphate phosphatase selected from the group consisting of:

- (a) ~~[[a]]~~ the DNA sequence of SEQ ID NO:9;
- (b) a DNA sequence encoding a polypeptide having vitamin B₆ phosphate phosphatase activity, which hybridizes under stringent hybridization and stringent washing conditions to the DNA sequence defined in (a) ~~or a fragment thereof~~, wherein the stringent hybridization and stringent washing conditions comprise hybridizing in 5xSSC, 0.3% SDS, 2% blocking reagent, 0.1% N-lauroylsarcosine, 50% formamide overnight at 42°C and washing twice in 2xSSC, 0.1% SDS at room temperature for 5 minutes and then washing twice in 0.1xSSC, 0.1% SDS at ~~50° C to~~ 68° C for 15 minutes;
- (c) a DNA sequence encoding a polypeptide having vitamin B₆ phosphate phosphatase activity, wherein said polypeptide is at least 95% 90% identical to the amino acid sequence of SEQ ID NO:10;
- (d) a DNA sequence encoding a polypeptide having vitamin B₆ phosphate phosphatase activity and is at least 95% 90% identical to the DNA sequence of SEQ ID NO:9; and
- (e) a degenerate DNA sequence of any one of (a) to (c).

Claim 2. (Cancelled).

Claim 3. (Withdrawn) A polypeptide encoded by the isolated DNA of claim 1.

Claim 4. (Currently Amended) A recombinant microorganism of the genus *Sinorhizobium* or *Escherichia*, capable of producing vitamin B₆ from vitamin B₆ phosphate, wherein said microorganism is transformed with a DNA encoding vitamin B₆ phosphate phosphatase selected from the group consisting of:

(a) ~~[[a]]~~ the DNA sequence of SEQ ID NO:9;

(b) a DNA sequence encoding a polypeptide having vitamin B₆ phosphate phosphatase activity, which hybridizes under stringent hybridization and stringent washing conditions to the DNA sequence defined in (a) ~~or a fragment thereof~~, wherein the stringent hybridization and stringent washing conditions comprise hybridizing in 5xSSC, 0.3% SDS, 2% blocking reagent, 0.1% N-lauroylsarcosine, 50% formamide overnight at 42°C and washing twice in 2xSSC, 0.1% SDS at room temperature for 5 minutes and then washing twice in 0.1xSSC, 0.1% SDS at ~~50°C to~~ 68°C for 15 minutes;

(c) a DNA sequence encoding a polypeptide having vitamin B₆ phosphate phosphatase activity, wherein said polypeptide is at least ~~95%~~ 90% identical to the amino acid sequence of SEQ ID NO:10;

(d) a DNA sequence encoding a polypeptide having vitamin B₆ phosphate phosphatase activity and is at least ~~95%~~ 90% identical to the DNA sequence of SEQ ID NO:9; and

(e) a degenerate DNA sequence of any one of (a) to (c).

Claim 5. (Original) The microorganism of claim 4, wherein said microorganism is *Sinorhizobium meliloti* IFO 14782 having pVKPtacpdxP (*S. meliloti* IFO 14782/pVKPtacpdxP).

Claim 6. (Original) The microorganism of claim 4, wherein said microorganism is *Escherichia coli* JM109 having pKKpdxP (*E. coli* JM109/pKKpdxP).

Claim 7. (Original) A process for preparing a cell-free extract having vitamin B₆ phosphate phosphatase activity, which comprises cultivating the microorganism according to claim 4 wherein the microorganism is cultivated under conditions in a medium containing an assimilable carbon source, a digestible nitrogen source, inorganic salts, and other nutrients necessary for the growth of the microorganism at a pH value of about 5.0 to about 9.0, at a temperature about 5°C to about 45°C, and for 1 day to about 15 days under aerobic conditions, and disrupting cells of the microorganism.

Claim 8. (Withdrawn) The process for producing vitamin B₆ from vitamin B₆ phosphate which comprises contacting vitamin B₆ phosphate with the cell-free extract of microorganism according to claim 4 in a reaction mixture, and recovering the resulting vitamin B₆ from the reaction mixture.

Claim 9. (Previously presented) The process according to claim 7, wherein said microorganism is *Sinorhizobium meliloti* IFO 14782 having pVKPtacpdxP (*S. meliloti* IFO 14782/pVKPtacpdxP).

Claim 10. (Previously presented) The process according to claim 7, wherein said microorganism is *Escherichia coli* JM 109 having pKKpdxP (*E. coli* JM 109/pKKpdxP).

Claim 11. (Previously presented) A recombinant microorganism of the genus *Sinorhizobium* or *Escherichia*, capable of producing vitamin B₆ from vitamin B₆ phosphate, wherein said microorganism is transformed with the vector or plasmid of claim 1.

Claim 12. (Withdrawn) The process according to claim 8, wherein said microorganism is *Sinorhizobium meliloti* IFO 14782 having pVKPtacpdxP (*S. meliloti* IFO 14782/pvKKPtacpdxP).

Claim 13. (Withdrawn) The process according to claim 8, wherein said microorganism is *Escherichia coli* JM109 having pKKpdxP (*E. coli* JM 109/pKKpdxP).

Claim 14. (Currently Amended) An isolated polynucleotide comprising ~~[[a]]~~ the polynucleotide sequence of SEQ ID NO:9.

Claim 15. (Previously presented) An isolated polynucleotide comprising a polynucleotide sequence that encodes the polypeptide sequence of SEQ ID NO:10.

Claim 16. (New) A process for producing vitamin B₆ from vitamin B₆ phosphate which comprises:

(a) cultivating a recombinant microorganism according to claim 4 wherein the recombinant microorganism is cultivated under the following conditions: in a medium containing an assimilable carbon source, a digestible nitrogen source, inorganic salts, and other nutrients necessary for the growth of the microorganism at a pH value of about 5.0 to about 9.0, at a temperature about 5°C to about 45°C, and for 1 day to about 15 days under aerobic conditions;

(b) disrupting cells of the recombinant microorganism to produce a cell-free extract; and

(c) contacting vitamin B₆ phosphate with the cell-free extract in a reaction mixture, and recovering the resulting vitamin B₆ from the reaction mixture.

Claim 17. (New) The process according to claim 16, wherein said recombinant microorganism is *Sinorhizobium meliloti* IFO 14782 having pVKPtacpdxP (*S. meliloti* IFO 14782/pVKPtacpdxP).

Claim 18. (New) The process according to claim 16, wherein said recombinant microorganism is *Escherichia coli* JM 109 having pKKpdxP (*E. coli* JM 109/pKKpdxP).